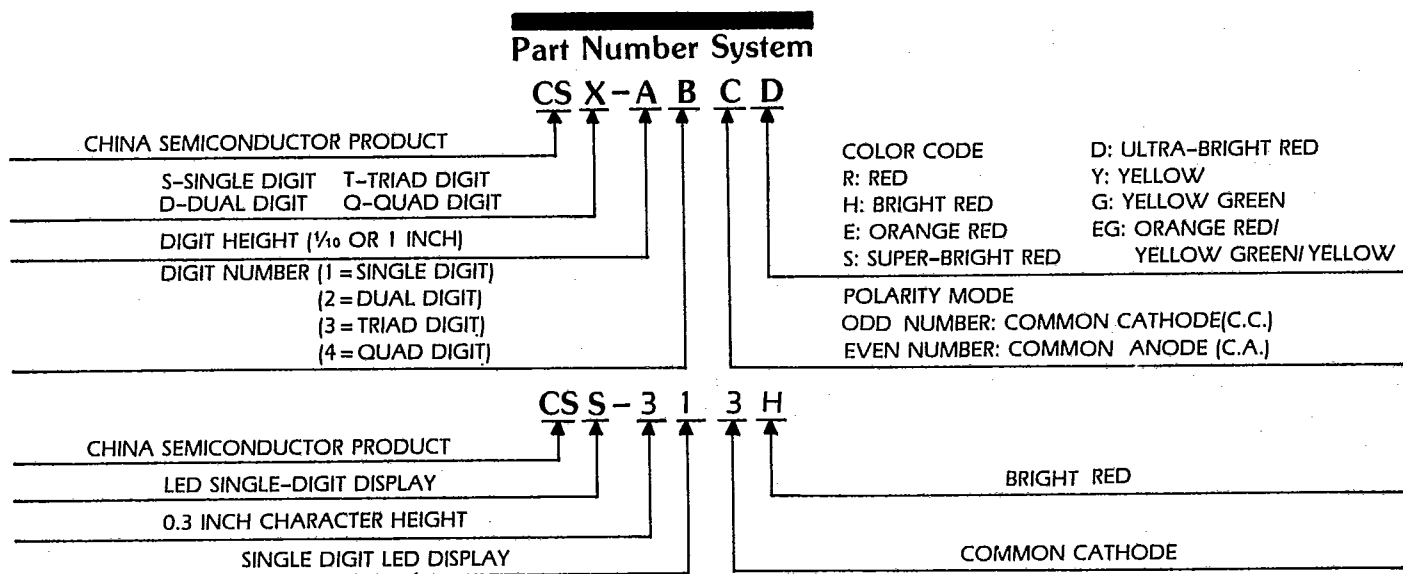



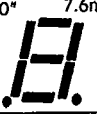
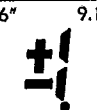
NUMERIC/ALPHANUMERIC DISPLAY














GENERAL INFORMATION








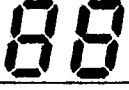


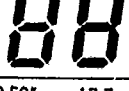
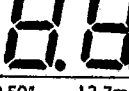











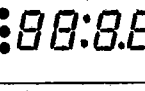
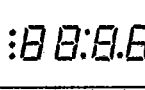

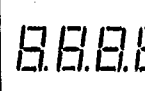
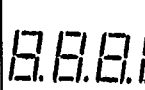
Electro-Optical Characteristics (Ta = 25°C)

COLOR	Peak Emission Wavelength λ_p (nm)	Dice Material	Forward Voltage Per Dice V_F (V)		Luminous Intensity I_v (ucd)	Test Condition
			TYP	MAX		
RED	655	GaAsP/GaAs	1.7	2.0	1,000	$I_F = 20$ mA
BRIGHT RED	695	GaP/GaP	2.0	2.8	1,400	$I_F = 20$ mA
ORANGE RED	635	GaAsP/GaP	2.1	2.8	4,000	$I_F = 20$ mA
SUPER-BRIGHT RED	660	GaAlAs/GaAs (SH)	1.8	2.5	6,000	$I_F = 20$ mA
ULTRA-BRIGHT RED	660	GaAlAs/GaAs (DH)	1.8	2.5	10,000	$I_F = 20$ mA
YELLOW	590	GaAsP/GaP	2.1	2.8	4,000	$I_F = 20$ mA
YELLOW GREEN	570	GaP/GaP	2.2	2.8	4,000	$I_F = 20$ mA

DIGIT HEIGHT	DIGIT/ DRIVE MODE	CSC PART NUMBER: CSS-, CSD-, CST-, CSQ-							MODE
		RED	BRIGHT RED	ORANGE RED	SUPER-BRIGHT RED	ULTRA-BRIGHT RED	YELLOW GREEN	YELLOW	
0.30" 7.6mm 	1 N/A	311R	311H	311E	311S	311D	311G	311Y	N/A
0.30" 7.6mm 	1 N/A	312R 313R	312H 313H	312E 313E	312S 313S	312D 313D	312G 313G	312Y 313Y	C.A. C.C.
0.36" 9.1mm 	1 N/A	316R 317R	316H 317H	316E 317E	316S 317S	316D 317D	316G 317G	316Y 317Y	C.A. C.C.

DIGIT HEIGHT	DIGIT/ DRIVE MODE	CSC PART NUMBER: CSS-, CSD-, CST-, CSQ-							MODE
		RED	BRIGHT RED	ORANGE RED	SUPER- BRIGHT RED	ULTRA- BRIGHT RED	YELLOW GREEN	YELLOW	
0.36" 9.2mm 	1 N/A	318R 319R	318H 319H	318E 319E	318S 319S	318D 319D	318G 319G	318Y 319Y	C.A. C.C.
0.40" 10.2mm 	1 N/A	410R	410H	410E	410S	410D	410G	410Y	N/A
0.40" 10.2mm 	1 N/A	414R 415R	414H 415H	414E 415E	414S 415S	414D 415D	414G 415G	414Y 415Y	C.A. C.C.
0.43" 11.0mm 	1 N/A	401R	401H	401E	401S	401D	401G	401Y	N/A
0.43" 11.0mm 	1 N/A	416R 417R	416H 417H	416E 417E	416S 417S	416D 417D	416G 417G	416Y 417Y	C.A. C.C.
0.50" 12.7mm 	1 N/A	510R 511R	510H 511H	510E 511E	510S 511S	510D 511D	510G 511G	510Y 511Y	C.A. C.C.
0.50" 12.7mm 	1 N/A	512R 513R	512H 513H	512E 513E	512S 513S	512D 513D	512G 513G	512Y 513Y	C.A. C.C.
0.52" 13.2mm 	1 N/A	516R 517R	516H 517H	516E 517E	516S 517S	516D 517D	516G 517G	516Y 517Y	C.A. C.C.
0.52" 13.2mm 	1 N/A	518R 519R	518H 519H	518E 519E	518S 519S	518D 519D	518G 519G	518Y 519Y	C.A. C.C.
0.56" 14.2mm 	1 N/A	514R 515R	514H 515H	514E 515E	514S 515S	514D 515D	514G 515G	514Y 515Y	C.A. C.C.
0.60" 15.2mm 	1 N/A	N/A N/A	612H 613H	612E 613E	612S 613S	612D 613D	612G 613G	612Y 613Y	C.A. C.C.
0.63mm 16.0mm 	1 N/A	614R 615R	614H 615H	614E 615E	614S 615S	614D 615D	614G 615G	614Y 615Y	C.A. C.C.
0.80" 20.3mm 	1 N/A	N/A N/A	815H 816H	815E 816E	815S 816S	815D 816D	815G 816G	815Y 816Y	C.C. C.A.

DIGIT HEIGHT	DIGIT/ DRIVE MODE	CSC PART NUMBER: CSS-, CSD-, CST-, CSQ-							MODE
		RED	BRIGHT RED	ORANGE RED	SUPER- BRIGHT RED	ULTRA- BRIGHT RED	YELLOW GREEN	YELLOW	
0.80" 20.3mm 	1 N/A	N/A N/A	817H 818H	817E 818E	817S 818S	817D 818D	817G 818G	817Y 818Y	C.C. C.A.
1.02" 26.0mm 	1 N/A	1012R 1013R	1012H 1013H	1012E 1013E	1012S 1013S	1012D 1013D	1012G 1013G	1012Y 1013Y	C.A. C.C.
1.77" 45.0mm 	1 N/A	N/A N/A	N/A N/A	1814E 1815E	1814S 1815S	1814D 1815D	1814G 1815G	1814Y 1815Y	C.A. C.C.
2.00" 50.8mm 	1 N/A	N/A N/A	N/A N/A	2012E 2013E	2012S 2013S	2012D 2013D	2012G 2013G	2012Y 2013Y	C.A. C.C.
2.24" 57.0mm 	1 N/A	N/A N/A	N/A N/A	2314E 2315E	2314S 2315S	2314D 2315D	2314G 2315G	2314Y 2315Y	C.A. C.C.
4.00" 101.6mm 	1 N/A	N/A N/A	N/A N/A	4012E 4013E	4012S 4013S	4012D 4013D	4012G 4013G	4012Y 4013Y	C.A. C.C.
0.30" 7.6mm 	2 DUPLEX	322R 323R	322H 323H	322E 323E	322S 323S	322D 323D	322G 323G	322Y 323Y	C.A. C.C.
0.30" 7.6mm 	2 DIRECT	326R 327R	326H 327H	326E 327E	326S 327S	326D 327D	326G 327G	326Y 327Y	C.A. C.C.
0.30" 7.6mm 	2 DIRECT	328R 329R	328H 329H	328E 329E	328S 329S	328D 329D	328G 329G	328Y 329Y	C.A. C.C.
0.40" 10.0mm 	2 DIRECT	422R 423R	422H 423H	422E 423E	422S 423S	422D 423D	422G 423G	422Y 423Y	C.A. C.C.
0.40" 10.1mm 	2 DIRECT	424R 425R	424H 425H	424E 425E	424S 425S	424D 425D	424G 425G	424Y 425Y	C.A. C.C.
0.50" 12.7mm 	2 DIRECT	520R 521R	520H 521H	520E 521E	520S 521S	520D 521D	520G 521G	520Y 521Y	C.A. C.C.
0.50" 12.7mm 	2 DUPLEX	522R 523R	522H 523H	522E 523E	522S 523S	522D 523D	522G 523G	522Y 523Y	C.A. C.C.

DIGIT HEIGHT	DIGIT/ DRIVE MODE	CSC PART NUMBER: CSS-, CSD-, CST-, CSQ-							MODE
		RED	BRIGHT RED	ORANGE RED	SUPER- BRIGHT RED	ULTRA- BRIGHT RED	YELLOW GREEN	YELLOW	
12.7mm 0.50" 	2 DIRECT	528R 529R	528H 529H	528E 529E	528S 529S	528D 529D	528G 529G	528Y 529Y	C.A. C.C.
13.8mm 0.54" 	2 DUPLEX	5422R 5423R	5422H 5423H	5422E 5423E	5422S 5423S	5422D 5423D	5422G 5423G	5422Y 5423Y	C.A. C.C.
14.2mm 0.56" 	2 DIRECT	524R 525R	524H 525H	524E 525E	524S 525S	524D 525D	524G 525G	524Y 525Y	C.A. C.C.
14.2mm 0.56" 	2 DIRECT	526R 527R	526H 527H	526E 527E	526S 527S	526D 527D	526G 527G	526Y 527Y	C.A. C.C.
14.2mm 0.56" 	2 DIRECT	5622R 5623R	5622H 5623H	5622E 5623E	5622S 5623S	5622D 5623D	5622G 5623G	5622Y 5623Y	C.A. C.C.
20.3mm 0.80" 	2 DIRECT	N/A N/A	822H 823H	822E 823E	822S 823S	822D 823D	822G 823G	822Y 823Y	C.A. C.C.
14.2mm 0.56" 	3 MPX	532R 533R	532H 533H	532E 533E	532S 533S	532D 533D	532G 533G	532Y 533Y	C.A. C.C.
14.2mm 0.56" 	3 DIRECT	534R 535R	534H 535H	534E 535E	534S 535S	534D 535D	534G 535G	534Y 535Y	C.A. C.C.
6.2mm 0.25" 	4 DIRECT	253R 254R	253H 254H	253E 254E	253S 254S	253D 254D	253G 254G	253Y 254Y	C.C. C.A.
6.2mm 0.25" 	4 MPX	255R 256R	255H 256H	255E 256E	255S 256S	255D 256D	255G 256G	255Y 256Y	C.C. C.A.
7.0mm 0.27" 	4 MPX	N/A 247R	N/A 247H	N/A 247E	N/A 247S	N/A 247D	N/A 247G	N/A 247Y	N/A C.C.
14.2mm 0.56" 	4 MPX	541R 542R	541H 542H	541E 542E	541S 542S	541D 542D	541G 542G	541Y 542Y	C.C. C.A.
14.2mm 0.56" 	4 DIRECT	543R 544R	543H 544H	543E 544E	543S 544S	543D 544D	543G 544G	543Y 544Y	C.C. C.A.